AMENDED CLAIM SET:

1. – 22. (cancelled).

23. (currently amended) A method for analysis of a chemical, physical, or biological toxic agent, which method comprises the steps of:

(a) exposing ~~the transgenic animal of claim 13~~ a non-human transgenic animal, comprising cells containing a construct of a stress-sensitive regulatory sequence functionally linked to a reporter-gene sequence, to the toxic agent;

(b) measuring expression of the reporter gene; and

(c) relating said expression to an effect of said toxic agent.

24. (previously presented) The method of claim 23, wherein the same animal is used for repeated tests with the same toxic agent or with a different toxic agent.

25. (previously presented) The method of claim 23, wherein said analysis is of toxicity kinetics of one or more toxic agents.

26. (previously presented) The method of claim 23, wherein said analysis is of heat stress.

27. (previously presented) The method of claim 23, wherein said analysis is of metal toxicity.

28. (previously presented) The method of claim 27, wherein the metal is selected from the group consisting of Rb, Cr, Cu, Hg, As, and Cd.

29. – 32. (cancelled).

33. (currently amended) A method for *in vivo* analysis of the toxicity of a chemical, physical, or biological agent, which method comprises the steps of:

(a) exposing a transgenic animal ~~of claim 13~~ , comprising cells containing a construct of a stress-sensitive regulatory sequence functionally linked to a reporter-gene sequence, to the agent;

(b) ~~(c)~~ measuring expression of a reporter gene in said transgenic animal; and

(c) ~~(d)~~ relating said expression to an effect of said agent.

34. (previously presented) The method for *in vivo* analysis of claim 33, wherein said animal is a mouse.

35. (cancelled).

36. (new) A method for analysis of a chemical, physical, or biological toxic agent, which method comprises the steps of:

(a) exposing a transgenic rodent, comprising cells containing a construct of a heat shock protein promoter sequence functionally linked to a reporter-gene sequence selected from the group consisting of a growth hormone gene sequence, a chloramphenicol acetyl transferase gene sequence, and a green fluorescence protein gene sequence, to the toxic agent;

(b) measuring expression of the reporter gene; and

(c) relating said expression to an effect of said toxic agent.

37. (new) The method of claim 36, wherein said rodent is a mouse and said reporter-gene sequence is a growth hormone gene sequence.

38. (new) A method for *in vivo* analysis of the toxicity of a toxic metal, which method comprises the steps of:

(a) exposing a transgenic mouse, comprising cells containing a construct of a heat shock promoter sequence functionally linked to a growth hormone gene sequence, to the metal;

(b) measuring the increase of growth hormone plasma concentration in said transgenic mouse; and

(c) comparing said increase in growth hormone concentration to a control growth hormone concentration.

39. (new) The method of claim 38, wherein the toxic metal is arsenic or mercury.

40. (new) The method of claim 24, wherein a hsp70/HGH mouse is used for repeated tests with arsenic.